

REMARKS

The Official Action dated November 27, 2002 has been carefully considered. Additionally, the telephone interview of January 15, 2003 which Examiner Mohamed and Examiner Low courteously afforded Applicants' representatives is acknowledged and appreciated. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

Although, a formal agreement regarding the claims was not reached during the aforementioned interview, the claim amendments presented herein were discussed and are believed to overcome the outstanding rejections.

More particularly, claim 22 has been amended to clearly recite a method for treating a patient having Metabolic Syndrome comprising Primary Insulin Resistance and abdominal/visceral obesity to decrease insulin resistance. A Version With Markings Showing Changes Made is attached. It is believed that these changes do not involve any introduction of new matter, and do not raise any new issues subsequent to final rejection of the claims whereby entry is believed to be in order and is respectfully requested.

Claims 22-24 and 41-42 were rejected under 35 U.S.C. §103 as being obvious over Johansson et al, *Metabolism*, Vol 44, No 9, Pages 1126-1129 (September 1995). The Examiner asserted that Johansson et al teach that growth hormone deficient patients are hormone resistant and that the use of recombinant human growth hormone after six months restores insulin sensitivity to baseline values. Therefore, the Examiner asserted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use growth hormone for treating insulin resistance in a patient having Metabolic Syndrome and abdominal/visceral obesity. The Examiner indicated that the previously filed Declaration Under 37 C.F.R. 1.132 of Dr. Sigbritt A.M. Werner was insufficient to overcome the rejection, as there is no evidence or data in the Declaration.

However, as will be set forth in detail below, Applicants submit that the methods defined by claims 22-24 and 41-42 are nonobvious over and patentably distinguishable from the teachings of Johansson et al and that the Declaration rebuts any prima facie case of obviousness which may have been established. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

More particularly, claim 22 recites a method for treating a patient having Metabolic Syndrome comprising Primary Insulin Resistance and abdominal/visceral obesity to decrease insulin resistance. The method comprises administering to said patient growth hormone or a functional derivative thereof in an amount effective for decreasing insulin resistance of said patient.

Applicants find no teaching, suggestion or reference by Johansson et al of a method for treating a patient having Metabolic Syndrome to decrease insulin resistance, as recited in claim 22. Rather, the Johansson et al reference is directed to insulin resistance of adult patients who are growth hormone deficient. The 1993 Fowelin et al study cited by Johansson et al teaches that after 26 weeks of growth hormone treatment, insulin sensitivity returns to base line values in growth hormone deficient patients. Applicants find no teaching, suggestion, or reference in Johansson et al of the use of growth hormones to decrease insulin resistance in patients who are insulin resistant due to Metabolic Syndrome. Therefore, one of ordinary skill in the art would not have immediately envisaged the use of growth hormones as disclosed by Johansson et al to treat insulin resistance in a patient with Metabolic Syndrome.

Moreover, the Examiner's attention is again directed to the previously filed Declaration of Dr. Sigbritt A. M. Werner. Dr. Werner serves as a Professor in Endocrinology and Vice President at Karolinska Institute and, as discussed during the aforementioned interview, offers her opinions regarding the state of the art and particularly what Johansson et al teach and suggest to those skilled in the art. Opinion testimony is entitled to consideration and weight as long as the opinion is not on the ultimate legal conclusion at issue, MPEP

§716, and opinion testimony regarding what the prior art taught may be entitled to considerable deference, *In re Carroll*, 202 U.S.P.Q. 571 (CCPA 1979).

According to paragraph 3 of Dr. Werner's Declaration, based on her experience in the medical fields, and particularly the field of endocrinology, it is her opinion that growth hormone deficient patients are distinct from patients who are not growth hormone deficient. Specifically, growth hormone deficient patients do not produce growth hormones and therefore their hormone levels and their therapeutic responses to growth hormone administration differ significantly from the hormone levels and therapeutic response to growth hormone administration in a patient who is not growth hormone deficient. Thus, a therapeutic response to growth hormone administration in a growth hormone deficient patient cannot be used to predict a response to growth hormone administration in a patient who is not growth hormone deficient. Specifically, the effect of growth hormone administration on insulin resistance in a growth hormone deficient patient cannot be used to predict an effect of growth hormone administration on insulin resistance in a patient who is not growth hormone deficient.

Also, as noted at paragraph 4 of the Declaration, based on her experience in the field of endocrinology, it is Dr. Werner's opinion that an individual who has Metabolic Syndrome does not inherently exhibit growth hormone deficiency, and an individual who has growth hormone deficiency does not inherently exhibit Metabolic Syndrome.

Further, as noted at paragraph 5 of the Declaration, based on her experience in the field of endocrinology, it is her opinion that Johansson et al do not teach or suggest insulin resistance in individuals with Metabolic Syndrome and thus, cannot be used to suggest growth hormone administration to decrease insulin resistance in individuals having Metabolic Syndrome.

Thus, the Declaration establishes the understandings of one of ordinary skill in the art with respect to Johansson et al, and the differences between Johannsson et al and the present

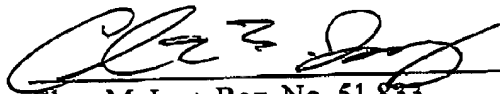
invention which are evident to one of ordinary skill in the art. The Declaration is therefore entitled to consideration and weight, notwithstanding the fact that the Declaration does not contain data evidence.

References relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public, *In re Payne*, 203 U.S.P.Q. 245 (CCPA 1979). In view of the failure of Johansson et al to teach, suggest or recognize a method for treating insulin resistance in a patient with the Metabolic Syndrome by decreasing insulin resistance, the reference does not provide an enabling disclosure of the present invention, and therefore does not support a rejection of the claims under 35 U.S.C. §103.

It is therefore submitted that the methods defined by claims 22-24 and 41-42 are not rendered obvious over Johansson et al and are patentably distinguishable therefrom, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the Examiner's rejection under 35 U.S.C. §103, and places the present application in condition for allowance. Reconsideration and an early allowance are requested. In the event that the present application is not in condition for allowance, entry of the present amendment for purposes of appeal is requested.

Respectfully submitted,



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VERSION WITH MARKINGS SHOWING CHANGES MADE

In the Claims:

Please amend claim 22 to read as follows:

22. (Fifth Amendment) A method for treating a patient having Metabolic Syndrome comprising Primary Insulin Resistance and abdominal/visceral obesity [for insulin resistance] to decrease insulin resistance[, said patient having Metabolic Syndrome comprising Primary Insulin Resistance and abdominal/visceral obesity], wherein said method comprises administering to said patient growth hormone or a functional derivative thereof in an amount effective for decreasing insulin resistance of said patient.

**DINSMORE
& SHOHL LLP****FACSIMILE TRANSMITTAL**

January 24, 2003

from **CLARE M. IERY**

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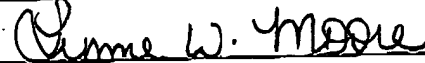
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PATENT
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AMENDMENT UNDER 37 CFR 1.116-

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January 24, 2003.


 Lynne W. Moore

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: Gudmundur Johannsson et al :
 Serial No.: 09/050,366 : Group Art Unit: 1653
 Filed: March 31, 1998 : Examiner: Abdel A. Mohamed
 For: **USE OF GROWTH HORMONE**

TRANSMITTAL OF AMENDMENT UNDER 37 C.F.R. 1.116

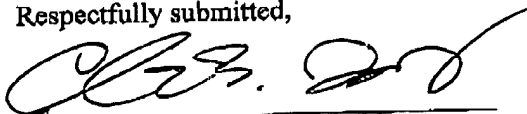
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Dear Sir:

Transmitted herewith is an Amendment Under 37 C.F.R. 1.116 in the above-identified application.

- [X] The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment, to Deposit Account No. 04-1133, including any filing fees under 37 CFR 1.16 for presentation of extra claims and any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,



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